

REMARKS

Claims 1 and 3-7 remain in the application with claims 1 and 3 having been amended hereby.

Reconsideration is respectfully requested of the rejection of claims 1, 3, 4, and 8 under 35 USC 103, as being unpatentable over Numazu et al. in view of Lowe et al.

As previously noted, the present invention is intended to provide an improved audio processing system in which signals are processed for playback over headphones, so that the audio image is not located inside the head of the headphone wearer. This is accomplished by providing two filter sections, a first signal processing unit or filter stage is a system in which the input signals are filtered or processed, such as shown in Figs. 2 and 3. The second stage is a pair of signal processing units or filters, such as shown in Fig. 5. Because the present invention is intended to provide an audio-imaging system that operates with reflective sound components, the two signals output from the first filter unit are not mixed thereafter. The signals are processed independently and in an uncorrelated fashion by using delay units having different delay times between the pair of second signal processing units or filters. Thus, the pair of second filter means are important in the present invention and it is necessary that the signals are kept separate and apart and unmixed, such that the filtering is not correlated and is performed independently.

Numazu et al. relates to a system for generating a so-

called presence in an audio signal, which corresponds to creating a larger sound field by artificially creating reflective sound signals. As shown in every relevant figure in Numazu et al., the left and right channel signals are intermixed such that a portion of the left channel is added in with the right channel and a portion of the right channel signal is added to the left channel signal.

Therefore, it is respectfully submitted that since Numazu et al. relates to generating artificially reflected sounds and comingling or intermixing the two signals corresponding to the left and right channels, it is respectfully submitted that one reading Numazu et al. would not be led to the presently claimed invention.

Although Lowe et al. relates to a sound localization system for use with a headphone, Lowe et al. also intermixes the left and right portions of the left and right channel signals and does not keep these signals separate and apart, as in the presently claimed invention.

Therefore, it is respectfully submitted that even combining Lowe et al. with Numazu et al., one would not have been led to arrive at the presently claimed invention.

Reconsideration is respectfully requested of the rejection of claims 5 and 6 under 35 USC 103, as being unpatentable over Numazu et al. in view of Lowe et al. and further in view of Inanaga et al.

Claims 5 and 6 depend from claim 3, which for the reasons set forth hereinabove is thought to be patentably distinct over the cited references and, for at least those very same

reasons, claims 5 and 6 are also submitted to be patentably distinct thereover.

Although Inanaga et al. relates to a headphone system in which rotation of the headphones or head is detected and used in the signal processing, Inanaga et al. does not cure the deficiency of the primary reference, as noted hereinabove.

Reconsideration is respectfully requested of the rejection of claim 7 under 35 USC 103, as being unpatentable over Numazu et al. in view of Lowe et al. and further in view of Inanaga et al. and Yamada et al.

Claim 7 depends from claim 3, which for the reasons set forth hereinabove is thought to be patentably distinct over the cited references and, for at least those very same reasons, claim 7 is also submitted to be patentably distinct thereover.

Although Yamada et al. discloses a head turning angle detector for use in a headphone, Yamada et al. does not supply the teaching of the present invention that is missing from the primary reference.

Accordingly, by reason of the amendments made to the claims hereby, as well as the above remarks, it is respectfully submitted that an audio processing apparatus in which the second stage filtering keeps the left and right channels separate and apart at all times and does not intermix the signals, as taught by the present invention and as recited in the amended claims, is neither shown nor suggested in the cited references, alone or in combination.

The reference cited as of interest has been reviewed and

is not seen to show or suggest the present invention as recited in the amended claims.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

COOPER & DUNHAM LLP

A handwritten signature in dark ink, appearing to read "Jay H. Maioli". The signature is stylized with a large, looped initial "J" and a cursive "H".

Jay H. Maioli  
Reg. No. 27, 213

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